

IN THE SPECIFICATION:

Please insert these amended Brief Description of the Drawings into the specification, after paragraph 0049 ("FIG. 10h illustrates a front cover completely open, in display mode"), including Figures 11 through 31.

BRIEF DESCRIPTION OF DRAWINGS

FIG 1 is revised and is corrected for lines to be uniformly thick and well defined.

FIG 11 is new and shows a chain of pouches, expanded into parallel mode, hanging by a perforation in the ultimate pouch.

FIG 12 is new and shows an inserted divider in an open mouthed pouch.

FIG 13 is new and shows a sectional view of the pouch in Fig 12 taken in the sectioning plane and in the direction indicated by the line 13-13.

Fig 14 is new and shows an enlarged view of the section in Fig 13 in the area described by the circle indicated by the number 14 in Fig 13.

Fig 15 is new and shows a pouch with seams forming horizontal internal compartments.

Fig 16 is new and shows a sectional view of the pouch in Fig 15 taken in the sectioning plane and in the direction indicated by the line 16-16.

Fig 17 is new and shows a pouch with seams forming vertical internal compartments and open pouch mouths.

Fig 18 is new and shows a sectional view of the pouch in Figure 17 taken in the

sectioning plane and in the direction indicated by line 18-18.

Fig 19 is new and shows a tear off corner being separated from a pouch.

Fig 20 is new and shows a sectional view of the pouch and separated corner in Fig 19 taken in the sectioning plane and in the direction indicated by the line 20-20.

Fig 21 is new and shows a pouch with an embedded divider and sealed pouch mouth.

Fig 22 is new and shows a sectional view of the pouch in figure 21 taken in the sectioning plane and in the direction indicated by the line 22-22.

Fig 23 is new and is an enlarged view of the section in Fig 22 in the area described by the circle indicated by the number 23 in Fig 22.

Fig 24 is new and shows an open mouthed pouch with an open mouthed external pocket.

Fig 25 is new and shows a sectional view of the pouch in Fig 24 taken in the sectioning plane and in the direction indicated by the line 25-25.

Fig 26 is new and shows a sealed pouch with a sealed external pocket.

Fig 27 is new and shows a sectional view of the pouch in Fig 26 taken in the sectioning plane and in the direction indicated by the line 27-27.

Fig 28 is new and shows a sealed pouch with a sealed external pocket and a rupturable intermediate wall.

Fig 29 is new and shows a sectional view of the pouch in Fig 28 taken in the sectioning plane and in the direction indicated by the line 29-29.

Fig 30 is new and shows an enlarged view of the section in Fig 29 in the area described by the circle indicated by the number 30 in Fig 29.

Fig 31 is new and shows a chain of hanging, sealed pouches adapted to the shape and size of non-planar inserts, with one pouch detached for dispensing.

IN THE SPECIFICATION:

Please amend the drawing to be used for the abstract. Applicant requests substitution of Fig. 31 for Fig. 2 as the drawing associated with the abstract.

Please append the abstract below to the specification.

Abstract

A storage system comprising two or more pouches joined sequentially pouch-lip to pouch-lip by a flexible coupling portion, wherein each coupling portion flexes to permit manipulation of the joined set of pouches, combines advantageous modes of storage, display and access, such as paging, tipping/fan, accordion, parallel, push down, reverse parallel, and pull up modes, with a greatly simplified manufacturing process. The storage system is a very versatile product, suitable for use with a wide variety of inserts, whether planar or non-planar objects, solids or liquids, and for a wide variety of uses to improve identification, retrieval or dispensing of stored inserts.

IN THE SPECIFICATION:

Please replace the following numbered paragraphs in the specification. They have been amended to include reference to the new drawings.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0100] Alternative embodiments include chained pouches with perforations (Fig. 11) in one or more coupling portions and/or pouches, or loops or other accessories affixed to one or more coupling portions and/or pouches. In certain instances it may be desirable to provide single or multiple holes at various points in a chained pouches system to allow temporary binding of a chained pouches system. If two holes are provided along the top edge near the corners of the hinges between pouches, the system can be bound through the aligned holes. While bound in this fashion, paging mode is the only available mode. If the holes are along the bottom edges of the pouches, the mode is limited to fan mode. In either of these examples the chained pouches system could easily be removed from the binding, used in all the display modes and easily be interchanged with other chained pouches systems. If a series of single holes is made through a top corner of each hinge and the chained pouches system bound through these aligned holes semi-fanning or semi-paging modes are possible. In these modes the inserts are easily visualized, including fronts and backs of pouches, the items are still easily removable, and the chained pouches system is maintained in a mostly closed, compact storage configuration.

[0099] As shown in FIGS. 1 and 2, structurally, pouches 100 and 200 are of sufficient depth to contain an inserted object such as a computer disk 151 and 152, sharing a common top border 181 connecting them, when the pouches are front to back. The side seams 14 of the pouches are not carried to the tops of the pouch. The portions of the pouch walls without side seams 11 and 21 become foldable with hinges 16, 18 and 26 across the faces of the pouches at the level of the upper end of the side seam and at the top edge connecting adjacent pouches. An entire chain of such connected pouches is fabricated from a single piece of stock by folding the material in an accordion like fashion at the bottom and top of each pouch and at the hinges and sealing the sides of the pouches. The chain can be made longer by serially attaching smaller chains or by manufacturing the chain to the desired length and capacity. A cover 60 can be incorporated into the chain by adapting the last pouch to be a cover. This is done by adjusting the folding and seaming process to lengthen the last hinge in the chain and to form an attached flap 40 extending from the bottom of the last pouch in the chain. A fastening means 44 and 48 is affixed to the flap and at the bottom of the second to last pouch in the chain. By pivoting the last pouch forward over the entire closed chain the flap may be wrapped around the bottom of the stack of pouches bringing the fastening means into approximation allowing closure of the cover. As shown in FIG. 9 and FIGS. 10a to 10h, the cover is formed from the last and second last pouches in the chain. Further, a hanging loop (30, in FIG. 2) is incorporated into the chain at the termination of the stock material at either end of the chain. The stock material is folded over on itself and a seam is formed anchoring the termination of the material across the face of the pouch at the level of the tops of the side seams. This forms a loop at either end of a chained pouch. A horizontally mounted rod is inserted through the loop to support the chained pouches system in a hanging parallel display. The capacity of the chained pouches system is easily doubled by incorporating embedded or laminated dividers between the front and rear walls of a pouch (Fig. 12, Fig. 13, Fig 14, and Fig. 22) and inserting disks on each side of the divider. This protects the fragile surfaces of the disks from scratching each other. A reinforcement along the top exposed edge of the divider can be affixed by heat laminating a narrow strip of plastic film to the border of the exposed portion of the divider.

[0130] A pouch with two or more internal compartments can be formed by making and joining seams (e.g., by heat welding of plastic if the pouch is made of plastic) across portions of a pouch (Fig. 15, Fig. 16, Fig 17, and Fig. 18). Compartments within a pouch can be independently labeled and accessed (typically by opening a preformed access groove).

[0128] The pouch mouths can be sealed, e.g., permanent sealing that requires breach of the pouch to remove the insert, or resealable, e.g., using mating lips formed in the pouch material (Fig. 22 and Fig 23). A label can be applied across or near a sealed pouch mouth. The length of labeling material applied can be used to monitor the total length of a chained pouches system.

[0132] Pouches in a chained pouches system can be filled with an insert and distributed while chained, and then dispensed individually or in groups of pouches using vending machines or other types of dispensing apparatus. Alternatively, pouches in a system can be distributed empty, and filled with an insert at a point of dispensing. Such dispensing typically involves cutting or otherwise severing a coupling portion that results in the desired number of pouches being dispensed (Fig. 31 and Fig. 32). For use in a public dispensing machine, pouches are typically printed or labeled for retail sale. For use in a private dispensing machine, pouches are typically printed or labeled using minimal text, barcode, or other commercially acceptable coding. For instance, a pouch can be filled with liquid, gel or food substance such as an electrolyte, energy gel, or candy bar. Use of liquid and gel contents of pouches requires watertight closure of the pouch mouth. Closure of the pouch mouth is also desirable for non-liquid or -gel contents that might degrade from exposure to the atmosphere, e.g., dried foods, sugar, salt, spices. A tear off corner on sealed pouch can be included to improve the ease of retrieval of the insert (Fig. 19 and Fig. 20), especially for retail dispensing of pouches.

[0136] Chained pouches systems can be made of transparent, semi-transparent, or opaque material, and are typically made of a plastic with characteristics suited to the insert weight, shape, and handling. If the material is semi-transparent, or opaque, a transparent window can be included in the pouch or coupling portion areas. Chained pouches systems can also be made of paper or other flexible material. Chained pouches systems can also be constructed with die-cut hinges, individual pouches pre-folded with the addition of hinges; pouches folded, glued and hinges applied; hinge integral or created by adhesive tape; with flexible hinge gussets, with rigid hinge gussets, with or without variable height side seams. The length of the side seam determines the amount of insert exposed about the pouch-lips, and depending on the insert, the amount desirable to expose may change. Chained pouches systems can be constructed with embedded dividers (Fig. 22). It may be desirable with certain fragile inserts to have a permanently affixed divider between the front and back walls of a given pouch or in all the pouches in a chain. For example such a retainer made of suitable material would provide for protection from scratches during removal or insertion if compact disks were stored back to back. This enables a protected double storage in each pouch.

[0138] One or more pockets, sealed or with an open-pocket mouth, may be applied to the outer surface of any number of the pouches, typically by heat welding of sections of the same or similar plastic material with which the main pouch is made to the front or rear wall of the main pouch (a pouch with coupling portions attached), (Fig. 24, Fig. 25, Fig. 26, and Fig. 27). The exterior pockets can be used to hold labels or identifiers or other objects of a flat, thin configuration that may be desirable to be filed with the pouch insert. The viewing of these external pockets would be directly using the paging mode, or the pockets could be visible through a transparent or discontinuous hinge in the fan, accordion or parallel viewing modes. Or if an insert is in an exterior pocket applied to the front surface of the first pouch, the insert need not have the flat, thin configuration. For example, a pen may be contained in an external pocket of the front pouch. Pouches made with one or more extra pockets have special utility when the interior abutting walls of the pouch compartments can be ruptured more easily than the exterior walls. One embodiment of an "extra pocketed pouch" is one with a liquid-filled, sealed main pouch and a second exterior sealed pouch that contains a second substance to be mixed with the substance in the main pouch. Pressure applied to the exterior pocket causes rupture of a wall defect (Fig. 28, Fig. 29, and Fig. 30), or other means in the section of the exterior pouch abutting the main pouch, which allows passage of the contents of the exterior pouch into the main pouch. The mixture is kneaded manually, and a corner of the envelope can be torn off for dispensing. This embodiment is useful for mixing adhesives and mastics, such as epoxy glues. Another embodiment enables mixing condiments to taste, e.g., ketchup in the main

pouch and hot sauce in the exterior pouch, or mayonnaise in the main pouch and mustard in the exterior pouch.

[0149] Chained pouches systems can be constructed with variations in the size and shape of pouches, and the material with which the pouches are constructed, to better accommodate planar inserts, such as film, transparencies, documents, music discs, video discs, memory modules, and patient records, or non-planar inserts (Fig 31), such as pills, small parts, or small tools.

IN THE SPECIFICATION:

Please amend the reference numbers as follows.

DRAWING REFERENCE NUMERALS

10 front wall of pouch

11 front wall hinging portion

12 rear wall of pouch

13 rear wall hinging portion

14 side seam

16 hinge (crease) A

18 hinge (crease) B

20=10

22=12

26 hinge (crease) C

30 loop

34 loop seam

40 flap

42 flap hinge

44 flap portion of fastening means

48 pouch portion of fastening means

52 extended pouch wall heights at coupling to cover envelope

60 cover envelope

64 seam

69 external pocket

70 perforation for hanging

75 inserted divider

80 tear off corner

90 seal

95 embedded divider

98 rupturable wall defect

100 first pouch

151 insert in first pouch

152 insert in second pouch

153 insert in third pouch

200 second pouch

300 third pouch